

Notice of Allowability	Application No.	Applicant(s)
	09/825,769	BLAKE ET AL.
	Examiner	Art Unit
	Vanessa L. Ford	1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 19 April 2005.
2. The allowed claim(s) is/are 13-17, renumbered as 1-5, respectively.
3. The drawings filed on 9/30/03 and 4/4/01 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date _____.
4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
 Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.


MARK NAVARRO
PRIMARY EXAMINER

ALLOWANCE

1. This Office Action is responsive to Applicant's remarks filed April 19, 2005. All rejections of record are withdrawn in view of Applicant's amendment and remarks.

Claims 13-17 are allowed and have been renumbered as 1-5, respectively.

2. The following is an examiner's statement of reasons for allowance. The prior art cited neither teaches nor suggests a method of producing pertussis toxin comprising cultivating *Bordetella pertussis* bacteria that lack cysteine desulfinase activity and isolating the toxin from the media.

3. Any inquiry of the general nature or relating to the status of this general application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Papers relating to this application may be submitted to Technology Center 1600, Group 1640 by facsimile transmission. The faxing of such papers must conform with the notice published in the Office Gazette, 1096 OG 30 (November 15, 1989). Should applicant wish to FAX a response, the current FAX number for the Group 1600 is (703) 872-9306.

Any inquiry concerning this communication from the examiner should be directed to Vanessa L. Ford, whose telephone number is (571) 272-0857. The examiner can normally be reached on Monday – Friday from 9:00 AM to 6:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith, can be reached at (571) 272-0864.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

[Signature]
Vanessa L. Ford
Biotechnology Patent Examiner
July 7, 2005

[Signature]
MARK NAVARRO
PRIMARY EXAMINER

CLEAN COPY OF CLAIMS

1. A method of producing pertussis toxin, comprising cultivating *Bordetella pertussis* bacteria that lack cysteine desulfinase activity; and isolating the toxin from the media.
2. The method according to claim 1, wherein the *Bordetella pertussis* bacteria are mutants having an DNA sequence integrated into a *Bordetella pertussis* cysteine desulfinase gene.
3. The method according to claim 2, wherein the mutant is strain BP536pWY.
4. The method according to claim 1, wherein the *Bordetella pertussis* bacteria are cultivated in the presence of cysteine desulfinase anti-sense sequences.
5. The method according to claim 4, wherein the anti-sense sequences are 8 to 15 bases in length and complementary to a nucleotide sequence set forth in SEQ ID NOS: 8-12.